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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/820,416

**Applicant(s)**

ENDLER ET AL.

**Examiner**

Blaine Basom

**Art Unit**

2173

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-11,26-28,30,32-35,37-40 and 42-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-11,26-28,30,32-35,37-40 and 42-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5/7/2008, 9/17/2008
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

The Examiner acknowledges the Applicants' submission, received on June 17, 2008, amending claims 1, 6-11, 26-27, 30, 32-35, 37-40, and 43-44. This Office Action is provided responsive to these amendments and the Applicant's corresponding remarks.

#### ***Information Disclosure Statement***

The information disclosure statements (IDS) submitted on May 7, 2008 and on September 17, 2008 were filed in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 11, and 26, and all claims dependent thereon, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The specification describes displaying first content (i.e. a "playback ring," a "playback head," and a

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“current function display”) on an annular display surface<sup>1</sup>, and second content (i.e. a menu and/or video content) on a physical display surface (see e.g. paragraphs 0057-0062 and FIGS. 6A and 6B of the publication of the application). The physical display surface (represented by reference number 625 in FIG. 6B) arguably comprises an inside concave portion (the specification makes no mention that it does comprise an inside concave portion). However, the specification makes no mention, nor can it be reasonably assumed, that such an inside concave portion is structured to define an aperture to permit viewing of the content via a viewing angle extending from the inside concave portion and through the aperture, as is required by independent claims 1, 11, and 26. As the remaining pending claims each depend from claim 1, 11 or 26, and thereby include all of the limitations of claim 1, 11, or 26, the remaining pending claims also fail to comply with the written description requirement.

Moreover, whereas the specification describes scrolling through content displayed on the physical display surface or on a “flat” display surface (see e.g. paragraphs 0005 and 0068-0069), the specification provides no support for scrolling through the content presented on an annular display surface, as is further required by claims 1, 7, 8, and 11.

As previously described, the specification describes displaying content (i.e. a “playback ring,” a “playback head,” and a “current function display”) on an annular display surface. However, the specification does not mention, nor can it be reasonably concluded, that a video stream is presented on such an annular display surface, as is further required by claim 26.

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<sup>1</sup> The specification makes no explicit mention of an “annular display surface.” Since, by definition, “annular” refers to “of, relating to, or forming a ring,” the display surface described in the specification comprising the “playback ring,” “playback head,” etc. is considered the annular display surface claimed.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 1-2, 6, 9-11, 30, 32, 35, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,628,313 to Minakuchi et al. (hereafter “Minakuchi”) as supported by “Merriam Webster’s Collegiate Dictionary, Tenth Edition” (hereinafter “Webster”), and also over U.S. Patent No. 5,946,142 to Hirata et al. (hereinafter “Hirata”).**

Regarding claims 1 and 11, Minakuchi describes an information retrieval method and apparatus in which main information, specified by the user, is displayed along with sub-information related to the main information (see e.g. column 2, line 65 – column 3, line 21). Minakuchi particularly discloses that the main information and its associated

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sub-information are presented via “virtual sphere” (see e.g. column 8, line 63 – column 9, line 14; and FIG. 5). Minakuchi further discloses that history information can be displayed alongside the main information and sub-information via a “virtual ring” surrounding the virtual sphere (see e.g. column 15, lines 1-40; and FIG. 13). Like claimed, Minakuchi teaches: means for displaying first content (i.e. the “information history”) on an annular display surface (i.e. on a “virtual ring”) within a display (see e.g. column 15, lines 1-40; and reference number 310 in FIG. 13); means for simultaneously displaying second content (i.e. “sub-information”) on a second display surface of the display, wherein the second display surface comprises an inside concave surface (see e.g. column 2, line 65 – column 3, line 12; column 8, line 63 – column 9, line 14; and reference number 303 in FIG. 13); and means for scrolling the first content (i.e. “rotating” the virtual ring) based on instructions while displaying the second content (see e.g. column 15, lines 1-23; and FIG. 13). Minakuchi further discloses that a “memory device” stores the second content (see e.g. column 2, line 65 – column 3, line 20; and column 5, line 25 – column 6, line 4). A commonly understood definition of “capture,” with respect to the art, is “to record in a permanent file (as in a computer)” (see e.g. the definition of “capture” provided by Webster). The memory device of Minakuchi is thus considered a “content capturing device,” given the broadest, most reasonable definition of such a device; the memory device of Minakuchi is used for capturing content, i.e. recording content in a permanent file. Accordingly, Minakuchi further teaches capturing the second content with a content capturing device (i.e. a memory device), as is claimed. Minakuchi thereby teaches a method and system like recited in claims 1 and 11, respectively. However, whereas Minakuchi suggests (e.g. at column 5, line 25 – column

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6, line 4) that the virtual sphere (including the virtual ring and the second content) is presented on a physical display surface (i.e. of a display device), Minakuchi does not explicitly disclose that the display surface comprises an inside concave portion structured to define an aperture to permit viewing of the second content via a viewing angle extending from the inside concave portion and through the aperture, as is recited in claims 1 and 11. Nevertheless, such displays are well known in the art.

For example, Hirata describes a projection type image display apparatus (e.g. a television) comprising an inside concave portion (i.e. a lens) structured to define an aperture to permit viewing of content via a viewing angle extending from the inside concave portion and through the aperture (see e.g. the abstract; column 1, lines 12-37; and column 5, line 28 – column 6, line 34).

It would have been obvious to one of ordinary skill in the art, having the teachings of Minakuchi and Hirata before him at the time the invention was made, to present the “virtual sphere” taught by Minakuchi on an image display apparatus like taught by Hirata, i.e. to present the annular display surface (i.e. virtual ring) and the second content (i.e. sub-information) taught by Minakuchi on a physical display surface (i.e. on the screen of the image display apparatus) of a display, whereby like taught by Hirata, the physical display surface comprises an inside concave portion (i.e. a lens) structured to define an aperture to permit viewing of content via a viewing angle extending from the inside concave portion and through the aperture. It would have been advantageous to one of ordinary skill to utilize such an image display apparatus because it is excellent in cost performance, as is suggested by Hirata (see e.g. column 1, lines 5-12; and column 4, lines

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45-54). Accordingly, Minakuchi, Webster, and Hirata are considered to teach, to one of ordinary skill in the art, a method and system like that of claims 1 and 11, respectively.

As per claim 2, Minakuchi further teaches storing the first content (i.e. “history information”) and the second content (i.e. “sub-information”) in a storage device (see e.g. column 2, line 65 – column 3, line 12; column 5, lines 56-58; and column 15, lines 1-5). Accordingly, the above-described combination of Minakuchi, Webster, and Hirata is further considered to teach a method like that of claim 2.

As per claim 6, Minakuchi suggests that the above-described method and system can be applied to search through pictures (see e.g. column 1, line 64 – column 2, line 35). In such situations, the second content (i.e. “sub-information”) is one of a video stream and digital image, like claimed. Accordingly, the above-described combination of Minakuchi, Webster, and Hirata is further considered to teach a method like that of claim 6.

Concerning claim 9, Minakuchi demonstrates that the second content (i.e. the “sub-information”) comprises a plurality of icons or thumbnails from which the user may select (see e.g. FIGS. 5-7; column 6, lines 33-40; column 9, lines 1-14; and column 9, lines 34-58). The second content described by Minakuchi is thus considered “menu information” like claimed. Accordingly, the above-described combination of Minakuchi, Webster, and Hirata is further considered to teach a method like that of claim 9.

With respect to claim 10, Minakuchi demonstrates that the display surface displays the second content (i.e. the “sub-information”) in a three dimensional viewpoint (see e.g. column 8, lines 63-67; and reference number 203 in FIG 5). Accordingly, the above-described combination of Minakuchi, Webster, and Hirata is further considered to

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teach a method like that of claim 10, in which the physical display surface displays the second content in a three dimensional viewpoint.

As per claims 30 and 35, Minakuchi demonstrates that the display surface comprises a semi-spherical shape and wherein the display surface substantially spans the semi-spherical shape of the display and the annular display surface spans a diameter of the display (see e.g. FIG. 13). Hirata further teaches presented such a display via a physical display surface, as is described above (see e.g. the rejection for claim 1). Accordingly, the above-described combination of Minakuchi, Webster, and Hirata is further considered to teach a method and system like that of claims 30 and 35, respectively.

As per claims 32 and 37, Minakuchi suggests that the user can control the direction and speed of playback of the second content, i.e. the user can control the direction and speed of rotation of the virtual sphere comprising the sub-information (see e.g. column 3, lines 35-46; column 9, lines 1-14). Accordingly, the above-described combination of Minakuchi, Webster, and Hirata is further considered to teach a method and system like that of claims 32 and 37, respectively.

**Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Minakuchi, Webster, and Hirata, which is described above, and also over U.S. Patent No. 7,107,516 to Anderson et al. (hereafter “Anderson”).** As described above, Minakuchi, Webster, and Hirata teach a method like that of claim 1, used for searching for information, in which first content is displayed on an annular display surface within a display and second content, provided by a content capturing

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device, is displayed on a spherical display surface of the display. Minakuchi suggests that such content can comprise pictures, as is described above (see e.g. the rejection for claim 6). Minakuchi, however, discloses that the content capture device providing the content is a memory device (see e.g. the rejection for claim 1), and not a digital camera as required in claim 5.

Nevertheless, providing content (i.e. pictures) from a digital camera that is in direct physical communication with a display device is well known in the art. For example, Anderson demonstrates directly coupling a display device to a digital camera for the purpose of viewing and searching content captured by the camera (see e.g. column 2, lines 30-51; and column 4, lines 19-44).

Accordingly, it would have been obvious to one of ordinary skill in the art, having the teachings of Minakuchi, Webster, Hirata, and Anderson before him at the time the invention was made, to couple a digital camera to the spherical display of Minakuchi, Webster, and Hirata, since this would allow the user to view on the display content captured by the user, as is demonstrated by Anderson. Minakuchi, Webster, Hirata, and Anderson are thus considered to teach, to one of ordinary skill in the art, a method like that of claim 5.

**Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Minakuchi, Webster, Hirata, and Anderson, as is described above, and also over PCT Publication No. WO 02/21529 to Barbieri.** As described above, Minakuchi, Webster, and Hirata teach a method like that of claim 1, used for searching for information, in which first content is displayed on an annular display surface within a

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display and second content is displayed on a spherical display surface of the display.

Anderson further teaches directly coupling a content capture device (i.e. a digital camera) to the spherical display for the purpose of searching through and displaying images captured by the content capture device, as is described above (see the rejection for claim 5). Minakuchi, Webster, Hirata, and Anderson, however, do not explicitly disclose that the content capturing device is a video camera, like recited in claims 5. Nevertheless, capturing video streams with a video camera, and then searching through the captured information is well known in the art.

For example, Barbieri teaches displaying a digital video image (considered analogous to the “main information” of Minakuchi) and determining similar video images (considered analogous to the “sub-information” of Minakuchi) that are associated with the video image (see e.g. page 2, lines 11-34). Such digital video images are necessarily taken with a content capturing device, i.e. a digital video camera, as is well-known in the art (see e.g. page 9, lines 31-34 of Barbieri).

Accordingly, it would have been obvious to one of ordinary skill in the art, having the teachings of Minakuchi, Webster, Hirata, Anderson, and Barbieri before him at the time the invention was made, to apply the spherical display of Minakuchi, Webster, Hirata, and Anderson to search for particular video images within a video stream captured by a digital video camera, like taught by Barbieri. That is, it would have been obvious to modify the spherical display of Minakuchi, Webster, Hirata, and Anderson such that the content (i.e. the first content and second content) comprises video, which has been captured by a content capturing device, i.e. a digital video camera. It would have been advantageous to one of ordinary skill to apply the interface of Minakuchi to

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search video, because video search functionality is becoming useful due to the increase of multimedia data that can be stored in home devices, as is taught by Barbieri (see e.g. page 1). Minakuchi, Webster, Hirata, Anderson, and Barbieri are thus considered to teach, to one of ordinary skill in the art, a method like that of claim 4.

**Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Minakuchi, Hirata, and Webster, as is described above, and also over U.S. Patent Application Publication No. 2002/0030665 to Ano.** As described above, Minakuchi, Webster, and Hirata teach a method like that of claim 1, used for searching for information, in which first content is displayed on an annular surface within a display and second content is displayed on a spherical display surface of the display. This second content is scrolled in response to instructions based on an input device, e.g. a trackball (see e.g. column 9, lines 1-14). As such, Minakuchi does not explicitly disclose that these instructions for scrolling are based on rotating a playback ring or knob, as is expressed in claims 7-8.

Nevertheless playback rings and knobs are well-known types of input devices used for scrolling displayed information. For example, Ano describes a playback ring (i.e. a “wheel”), considered a type of knob, which is used in conjunction with, e.g. a trackball, to scroll through content displayed on a screen (see e.g. paragraphs 0005, 0009, and 0098-0101).

It would have therefore been obvious to one of ordinary skill in the art, having the teachings of Minakuchi, Webster, Hirata, and Ano before him at the time the invention was made, to apply the playback ring of Ano to scroll through the displayed content of

Minakuchi, Webster, and Hirata, i.e. to rotate the spherical display. It would have been advantageous to one of ordinary skill to use such a playback ring, because it allows the user to more efficiently scroll through content, as is demonstrated by Ano (see e.g. paragraphs 0006-0009). Accordingly, Minakuchi, Webster, Hirata, and Ano are considered to teach, to one of ordinary skill in the art, a method like that of claims 7 and 8.

**Claims 33 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Minakuchi, Webster, Hirata, Anderson, and Barbieri, which is described above (i.e. in the rejection for claim 4), and also over U.S. Patent Application Publication No. 2004/0264579 to Bhatia et al. (hereafter “Bhatia”).** As described above, Minakuchi, Webster, and Hirata teach a method like that of claim 1 and a system like that of claim 11, used for searching for information, in which first content is displayed on an annular surface within a display and second content is displayed on a spherical display surface of the display. Barbieri particularly teaches that the content can be a video stream or digital image captured with a content capturing device, as is described above (see e.g. the rejection for claim 4). Minakuchi, Webster, Hirata, Anderson, and Barbieri, however, do not explicitly disclose that multiple video feeds are simultaneously displayed, as is required by claims 33 and 38. Nevertheless, simultaneously displayed multiple video feeds are well known in the art. For example, Bhatia demonstrates a method for simultaneously displaying a plurality of video streams (see e.g. paragraphs 0011-0014). It would have been obvious to one of ordinary skill in the art, having the teachings of Minakuchi, Webster, Hirata, Barbieri, Anderson, and

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Bhatia before him at the time the invention was made, to apply the display of Minakuchi, Hirata, Webster, Anderson, and Barbieri to simultaneously display a plurality of video feeds, because it is a useful feature in video presentation systems, as taught by Bhatia (see e.g. paragraphs 0004-007). Accordingly, Minakuchi, Webster, Hirata, Anderson, Barbieri, and Bhataia are considered to teach, to one of ordinary skill in the art, a method and system like that of claims 33 and 38, respectively.

**Claims 34 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Minakuchi, Webster, Hirata, Anderson, and Barbieri, which is described above (i.e. in the rejection for claim 4), and also over U.S. Patent Application Publication No. 2003/0146915 to Brook et al. (hereafter “Brook”).** As described above, Minakuchi, Webster, and Hirata teach a method like that of claim 1 and a system like that of claim 11, used for searching for information, in which first content is displayed on an annular display surface within a display and second content is displayed on a spherical display surface of the display. Barbieri particularly teaches that the first content can be a video stream or digital image captured with a content capturing device, as is described above (see e.g. the rejection for claim 4). Minakuchi, Webster, Hirata, Anderson, and Barbieri, however, do not explicitly disclose that the spherical display is configured to apply special effects (i.e. sepia tone, black and white tone, and/or slow shutter effect) to a portion of this content, as is required by claims 34 and 39. Nevertheless applying such special effects to video is well known in the art. For example, Brook demonstrates applying sepia tone and black and white special effects (see e.g. paragraph 0186). It would have been obvious to one of ordinary skill in the art,

having the teachings of Minakuchi, Webster, Hirata, Anderson, Barbieri, and Brook before him at the time the invention was made, to modify the display of Minakuchi, Webster, Hirata, Anderson, and Barbieri to apply special effects to the content, like taught by Brook. It would have been advantageous to one of ordinary skill to apply this modification because it allows the user to, for example, change to appearance of the content to suit his or her taste, as is demonstrated by Brook. Accordingly, of Minakuchi, Webster, Hirata, Anderson, Barbieri, and Brook are considered to teach, to one of ordinary skill in the art, a method and system like that of claims 34 and 39, respectively.

**Claims 26-28 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Minakuchi, Webster, Hirata, Anderson, and Barbieri, which is described above (i.e. in the rejection for claim 4), and also over the teachings of Ano, also described above.**

Specifically regarding claim 26, Minakuchi describes a display for simultaneously displaying first content (i.e. history information) and second content (i.e. sub-information), wherein the display comprises an annular display surface (i.e. “virtual ring”) for the first content and a spherical display surface (i.e. a “virtual sphere”) for the second content, and wherein the first and second content are stored in a storage module, as is described above. This second content (i.e. sub-information) is considered menu information like claimed, since it comprises a plurality of selectable items (see e.g. column 9, lines 34-58). Moreover, Barbieri teaches applying such an interface to search for video content, i.e. such that the first content (and second content) comprises a video stream, as is described above (see e.g. the rejection for claim 4). Hirata further teaches

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presenting such an interface on a physical display comprising an inside concave portion structured to define an aperture to permit viewing of the content (i.e. the first content on the annular display, and the second content on the spherical display) via a viewing angle extending from inside the concave portion and through the aperture. Anderson teaches directly coupling a content capture device to the display for the purpose of searching a displaying content captured by the content capture device, as is further described above (see e.g. the rejection for claim 4). Accordingly, the above-described combination of Minakuchi, Webster, Hirata, Anderson, and Barbieri teach a device similar to that of claim 26, which comprises: a content capturing device for capturing first content (i.e. video); a physical display for simultaneously displaying history information (comprising a video stream) and sub-information (i.e. menu information) wherein the physical display further comprises an annular display surface (i.e. virtual ring) for the video stream and a display surface comprising an inside concave portion structured to define an aperture to permit viewing of the content (i.e. the video content on the annular display, and the menu information on the spherical display) via a viewing angle extending from the inside concave portion and through the aperture. Minakuchi discloses that this second content is scrolled (i.e. the spherical display is rotated) in response to instructions based on an input device, e.g. a trackball, as is described above. As such, Minakuchi, Webster, Hirata, Anderson, and Barbieri do not explicitly disclose that these instructions for scrolling are based on rotating a playback ring, as is expressed in claim 26. Nevertheless playback rings are well-known types of input devices used for scrolling displayed information. For example, Ano describes a playback ring (i.e. a “wheel”), which is used in conjunction with, e.g. a trackball, to scroll through content displayed on a screen (see e.g. paragraphs

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0005, 0009, and 0098-0101). It would have therefore been obvious to one of ordinary skill in the art, having the teachings of Minakuchi, Webster, Hirata, Barbieri, Anderson, and Ano before him at the time the invention was made, to apply the playback ring of Ano to scroll through the displayed content of Minakuchi and Barbieri, i.e. to rotate the spherical display. It would have been advantageous to one of ordinary skill to use such a playback ring, because it allows the user to more efficiently scroll through content, as is demonstrated by Ano (see e.g. paragraphs 0006-0009). Accordingly, Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano are considered to teach, to one of ordinary skill in the art, a device like that of claim 26.

As per claim 27, Minakuchi demonstrates displaying the second content, i.e. menu information, with a three dimensional effect to distinguish it from the first content (see e.g. FIG. 13). Accordingly, the combination of Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano described in the previous paragraph further teaches a device like that of claim 27.

As per claim 28, Minakuchi suggests that if the first content (in this case, a video stream) is selected, it is presented as “main information” within the center of the virtual sphere (see e.g. column 3, lines 47-54; column 9, lines 34-58; and FIG. 13). In such circumstances, the second content, i.e. menu information, on the virtual sphere is shown overlaid on top of the video stream. Accordingly, the above-described combination of Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano further teaches a device like that of claim 28.

As per claim 40, Minakuchi demonstrates that the display surface comprises a semi-spherical shape and wherein the display surface substantially spans the semi-

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spherical shape of the display and the annular display surface spans a diameter of the display (see e.g. FIG. 13). Hirata further teaches presented such a display via a physical display surface, as is described above (see e.g. the rejection for claim 1). Accordingly, the above-described combination of Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano further teaches a device like that of claim 40.

**Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano, which is described above.** As described above, Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano teach a device like that of claim 26, used for searching for information, in which first content is displayed on an annular surface within a display and second content is displayed on a spherical display surface of the display. Barbieri particularly teaches that the first content can be a video stream or digital image captured with a content capturing device, as is described above (see e.g. the rejection for claim 4). Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano, however, do not explicitly teach controlling at least one of the direction and speed of such a video stream, as is required by claim 42. Nevertheless proving users the ability to control the direction and speed of playback of a video stream (by e.g. fast forward, reverse, etc. functions) is notoriously well known in the art. The Examiner takes OFFICIAL NOTICE of this teaching. Accordingly, it would have been obvious to one of ordinary skill in the art, having the teachings of Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano before him at the time the invention was made, to allow a viewer watching the first content (e.g. a video stream) displayed by the spherical display of Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano to change

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the direction or speed of playback of the content, like known in the art. It would have been advantageous to one of ordinary skill to apply this modification because it allows the user to, for example, skip over parts of the content (i.e. by fast forward operations) that are not interesting to the user, as is known in the art. Accordingly, Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano are further considered to teach, to one of ordinary skill in the art, a device like that of claim 42.

**Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano, which is described above, and also over U.S. Patent Application Publication No.**

**2004/0264579 to Bhatia et al. (hereafter “Bhatia”).** As described above, Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano teach a device like that of claim 26, used for searching for information, in which first content is displayed on an annular surface within a display and second content is displayed on a spherical surface of the display. Barbieri particularly teaches that the first content can be a video stream or digital image captured with a content capturing device, as is described above (see e.g. the rejection for claim 4). Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano, however, do not explicitly disclose that multiple video feeds are simultaneously displayed, as is required by claim 43. Nevertheless, simultaneously displayed multiple video feeds are well known in the art. For example, Bhatia demonstrates a method for simultaneously displaying a plurality of video streams (see e.g. paragraphs 0011-0014). It would have been obvious to one of ordinary skill in the art, having the teachings of Minakuchi, Webster, Hirata, Anderson, Barbieri, Ano, and Bhatia before him at the time the

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invention was made, to apply the display of Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano to simultaneously display a plurality of video feeds, because it is a useful feature in video presentation systems, as taught by Bhatia (see e.g. paragraphs 0004-007). Accordingly, Minakuchi, Webster, Hirata, Anderson, Barbieri, Ano, and Bhatia are considered to teach, to one of ordinary skill in the art, a device like that of claim 43.

**Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano, which is described above, and also over U.S. Patent Application Publication No.**

**2003/0146915 to Brook et al. (hereafter “Brook”).** As described above, Minakuchi, Webster, Hirata, Anderson, Barbieri and Ano teach a device like that of claim 26, used for searching for information, in which first content is displayed on an annular surface within a display and second content is displayed on a spherical surface of the display. Barbieri particularly teaches that the first content can be a video stream or digital image captured with a content capturing device, as is described above (see e.g. the rejection for claim 4). Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano, however, do not explicitly disclose that the spherical display is configured to apply special effects (i.e. sepia tone, black and white tone, and/or slow shutter effect) to a portion of this content, as is required by claim 44. Nevertheless applying such special effects to video is well known in the art. For example, Brook demonstrates applying sepia tone and black and white special effects (see e.g. paragraph 0186). It would have been obvious to one of ordinary skill in the art, having the teachings of Minakuchi, Webster, Hirata, Anderson,

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Barbieri, Ano, and Brook before him at the time the invention was made, to modify the display of Minakuchi, Webster, Hirata, Anderson, Barbieri, and Ano to apply special effects to the content, like taught by Brook. It would have been advantageous to one of ordinary skill to apply this modification because it allows the user to, for example, change to appearance of the content to suit his or her taste, as is demonstrated by Brook. Accordingly, Minakuchi, Webster, Hirata, Anderson, Barbieri, Ano, and Brook are considered to teach, to one of ordinary skill in the art, a device like that of claim 44.

### *Response to Arguments*

The Examiner acknowledges the Applicants' amendments to claims 1, 6-11, 26-27, 30, 32-35, 37-40, and 43-44. In response to these amendments, the objection presented in the previous Office Action to claim 26 is respectfully withdrawn, as is the 35 U.S.C. §112, second paragraph, rejection presented in the previous Office Action to claim 26.

Regarding the pending claims, the Applicants argue that Minakuchi fails to teach displaying first content on an annular display surface within a display, as is now claimed. The Examiner, however, respectfully disagrees. As is more fully described herein (see e.g. the rejection for claims 1 and 11, above), Minakuchi demonstrates displaying content on a "virtual ring." As it is annularly shaped, such a virtual ring is considered an "annular display surface" like claimed. Accordingly, the Examiner respectfully submits that Minakuchi in fact teaches displaying first content on an annular display surface within a display, as is claimed.

Further regarding the pending claims, the Applicants argue that Minakuchi and Fitzmaurice (U.S. Patent Application Publication No. 2004/0001111 to Fitzmaurice et al., cited in the previous Office Action) fail to teach a physical display surface comprising an inside concave portion structured to define an aperture to permit viewing of second content via a viewing angle extending from the inside concave portion and through the aperture, as is now claimed. In response, the Examiner presents the U.S. Patent to Hirata, which as shown above (see e.g. the rejection for claims 1 and 11), teaches such a physical display surface. The Applicant's arguments with respect to the claimed feature, "the physical display surface comprises an inside concave portion..." have thus been considered, but are moot in view of the new grounds of rejection presented herein.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

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advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blaine Basom whose telephone number is (571)272-4044. The examiner can normally be reached on Monday through Friday, from 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dennis Chow can be reached on (571)272-7767. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BTB/  
10/24/2008

/DENNIS-DOON CHOW/

Supervisory Patent Examiner, Art Unit 2173

